**NIGERIA: RELIEF AND DRAINAGE**

Relief refers to the surface features of the land above the sea level. The relief of Nigeria can be grouped into two main classes. These are lowlands and highlands.

**LOWLANDS/PLAINS**

These are areas below 300m above sea level. Areas of lowlands in Nigeria include the following.

1. The Sokoto Plain (200 – 300m)
2. The Niger – Benue Trough / Valley (100 – 300m)
3. The Chad Basin or Bornu Plain
4. The Niger Delta (0 – 100)
5. The Cross River Basin (120 – 180)
6. The Coastal Plain (0 – 100)
7. The interior coastal lowland of western Nigeria (100 – 300m)

**Rocks associated with lowlands**

1. **The coastal plain:** Sedimentary rocks of alluvial deposit.
2. **Niger – Benue trough:** Sedimentary rocks such as limestone, sandstone and shale.
3. **Sokoto plain:** Sedimentary rocks like sand, clay, sandstone and limestone.
4. **Chad basin:** Sedimentary rocks of sand and clay.

Rocks generally known to be associated with lowlands are sedimentary rocks.

**Importance of lowlands**

1. Plains, especially level ones are good for human habitation. Population and settlement are usually concentrated on plains.
2. Some plains are rich sources of minerals like petroleum, coal, etc.
3. Plains, especially depositional plains are very fertile for agriculture.
4. Plains, since they are level, favours communication such as roads, railways, and airports.
5. Rivers and plains (basin) provide jobs e.g. fishing.
6. Rearing of animals is also better done on level grounds.
7. Some plains have rivers which provide water for so many purposes.

**Disadvantages of lowlands**

1. Some plains, especially in delta areas, may be flooded with water. Flooding is an environmental hazard.
2. Some plains may pose a serious barrier to communication, especially in flooded areas.

**HIGHLANDS**

These are areas that are over 300m above sea level. Areas of highlands in Nigeria and their height include the following:-

1. The North-Central highlands
2. The Western highlands
3. The Eastern highlands
4. The Eastern scarp land

**The north-central highlands:**

This lies in the centre of Northern Nigeria around Kano, Kaduna Bauchi, Jigawa and Plateau State. The most important highland in these areas is the Jos Plateau (200 – 1500m). Rivers like Hadeija, Kaduna, and Sokoto etc. take their sources from Jos Plateau. The highest point of Jos Plateau is Shere Hills (1650m).

**The western highlands:**

This is found in the Western part of Nigeria around Ondo, Oyo, Kwara, and Osun State. Important hills in this area include the following:-

1. Idanre hill (950m)
2. Apata hill (400 – 700m)
3. Epeme hill (350 – 600m)

Three important rivers have their sources from these highlands. They are river Ogun, Osun and Osse.

**The eastern highlands:**

This is found in the border between Nigeria and Cameroun. They have the highest mountain in Nigeria. They include:-

1. Mandara Mountain (1200 – 1500m)
2. Biu Plateau (800 – 1000m)
3. Adamawa Mountain (1800 – 2400m)
4. Alantika and Shebshi Hills (1600 – 2000m)
5. Obudu and Oban hills (1200m)

Rivers found in these areas are River Gana, Ngodo and Yedseram which flow to Lake Chad.

**The eastern scarp land:**

This is found within the eastern region especially around Enugu and Nsukka. The only major highland found in this area is the Udi Nsukka plateau (300 – 600m). Important rivers include Anambra, Imo and Cross River.

**Rocks associated with highland**

1. Northcentral plateau, Western highland, Mandara Mountain, Shebshi, Alantika, Obudu and Oban hills are made up of basement complex rocks (a combination of igneous and metamorphic rocks).
2. Jos plateau is made up of volcanic rocks.
3. Udi hills are made up of Carboniferous sedimentary rock.

**Importance of Highlands**

1. Sources of mineral.
2. Formation of rainfall, especially orographic rainfall.
3. It is used for defence in times of war.
4. It serves as Windbreaks.
5. They are a good source of rivers.
6. The rivers provide the site for construction of Hydro-Electric Power (HEP).
7. They provide tourist centres.
8. They are used for transhumance.

**Disadvantages of Highlands**

1. Barriers to communication.
2. Mountains promote soil erosion.
3. Mountains occupy the good land that would have been used for other purposes.
4. They prevent human habitation.
5. Mountainous soils are poor in nutrients, therefore, are not good for agriculture.

**DRAINAGE**

Drainage refers to water bodies like rivers and lakes.

**RIVERS IN NIGERIA:**

Nigeria is drained by two main rivers – River Niger and River Benue. River Niger is the largest river in Nigeria and it has its source from Guinea highlands in Guinea. It passes through Mali and Niger Republic to Nigeria and empties itself in the Atlantic Ocean.

River Benue has its source from the eastern highlands and joins River Niger at Lokoja. Lokoja, because of this, is known as confluence town. Other rivers in Nigeria take their sources from highlands in Nigeria known as Hydrological centres. These are:

1. **Western highlands:** They have rivers such as Ogun, Osun and Osse.
2. **North-central highlands:** They have rivers such as Kaduna, Hadeija, Zamfara, Yobe, Gana, Gongola and Rima.
3. **Eastern highlands:** They have rivers such as Donga and Katsina-Ala.
4. **Eastern scarp lands:** They have rivers like Anambra and Cross River.

**CHARACTERISTIC OF NIGERIAN RIVERS**

1. The volume of the rivers changes with seasons. It increases during the rainy season and reduces during the drying season.
2. Presence of rapids and cataract. This impedes inland navigation.
3. Presence of debris like dead leaves, mud, wood, etc.
4. Short courses with high speed.
5. Specific direction of flow. Rivers in the south flow in the north-south direction while rivers in the north flow in a radial pattern to different directions.
6. Shallowness.
7. The colour changes with the season.
8. Seasonality: Most rivers flow during the rainy season and stop or reduce flowing to flow during the dry season.

**Importance of Nigeria Rivers**

1. Medium of transportation.
2. Generation of Hydro-Electric Power (H.E.P).
3. Irrigation purposes.
4. Domestic uses.
5. Industrial uses.
6. Provision of employment.
7. Recreation/Tourism.
8. Source of food supply (fishes, etc).

**RIVER BASIN IN NIGERIA**

River basin refers to the area generally drained by a river. A river basin is also known as a catchment area. In Nigeria, there are five major river basins. These are:-

1. The Niger basin
2. The Benue basin
3. The Chad basin
4. The Cross River basin
5. The South Atlantic basin

The rivers in these basins are grouped into 3 classes:

1. Long rivers with large basin e.g. River Niger and Benue.
2. Short rivers with small basin e.g. River Osun, Ogun, Cross River etc.
3. Rivers in basins of inland drainage: These are rivers that do not reach the sea but rather flow into Lake Chad. Examples are River Yobe, Hadeija, Gana and Yedseram.

**Importance of River Basin**

1. Good site for settlement.
2. Provision of suitable lands for agricultural purposes.
3. The medium of communication due to the presence of rivers.
4. Presence of some mineral deposits.
5. Provision of water.
6. Provision of sites for fishing.

**LAKES IN NIGERIA**

A lake is a body of water surrounded by land. The lakes are grouped into two major types:

1. **Man-made or artificial lakes:** They are lakes constructed by man e.g. lake kainji on River Niger and Shiroro lake on River Kaduna.
2. **Natural lake:** These are lakes which exist naturally e.g. Lake Chad.